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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,032	11/30/2000	Jeffrey Kent Fredenburgh	03266.000100	9978

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EXAMINER

WARE, DEBORAH K

ART UNIT PAPER NUMBER

1651

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,032

Applicant(s)

FREDENBURGH ET AL.

Examiner

Deborah K. Ware

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-69 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 3, 2006, has been entered.

Claims 46-69 are presented for examination on the merits.

Interview Summary

The Interview Summary details the discussion between the examiner and Jason Okun wherein it was pointed out to the examiner that the Horner et al reference was the WO Patent. This revelation led the examiner to make the decision for issuing a supplemental final action to Applicants amendment and response filed January 5, 2006.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on January 5, 2006, was received. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Amendment

The amendment response filed August 3, 2006, has been received and entered. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 46-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. in view of WO 97/43385 (Horner), Horney et al. , Blyth et al and Vinod, all cited of record on a PTO-892 and/or PTO-1449 Form

Claims are drawn to a composition for controlling odor associated with deposits of organic material which can cause odors, the composition comprising comprising dormant spore forming bacteria and adhering agents). The adhering agent can be stain-blocking chemicals or fluorochemicals. Further, the composition optionally includes sodium bicarbonate or molecular sieves. Also the stain-blocking agents can be varied sulfonated polymers.

Lin et al teach protected spore formers as the desired bacteria of which are of the genus *Bacillus* (B.) and include species *B. laevolacticus*, *B. pasteurii* and *B. amyloliquefaciens*. Note col. 3, lines 19-21 and col. 4, lines 40-65. Further, the cell counts are within 10^6 to 10^8 range, note col.s 5-6, lines 35-40.

WO Patent (Horner), cited above, teach a composition for controlling odor for soft surfaces and hard surfaces using microbial enzymes and sulfonated surfactants, anti-soil agents (pages 32-33, all lines), sodium carbonate (page 56, line 20), bicarbonates (page 30, line 33), condensation polymers (page 12, lines 20-35).

Horney et al teach method and composition for controlling odor for soft surfaces using *Bacillus* bacterial agent and other additives as necessary. *Bacillus megaterium* is specifically disclosed. Note col. 2, lines 30-50 and see the abstract. Also note col. 3-4, all lines.

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Each of Blyth et al. and Vinod teach method and composition for controlling stains on soft surfaces comprising applying stain blockers and fluorochemicals. Specifically note Vinod, at col. 6, lines 45-65., and note abstracts of both references.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was filed to combine the disclosure of Lin, WO Patent, Horney, Blyth and Vinod in order to provide for a composition for controlling odor. Each of Lin, WO Patent (Horner) and Horney teach deodorizing using bacterial agents and their products (i.e. dormant spores, enzymes, etc.). To select for dormant bacteria to control and provide for a composition for odor control is clearly taught. To combine the dormant bacteria with adhering agents is also disclosed wherein surfactants will adhere organic deposits and thus, function as an adhering agent.

Other adhering agents and/or trapping agents or neutralizing agents such as bicarbonate (i.e. sodium bicarbonate is disclosed). Specifically stain-blockers and fluorochemicals are well known in the art to be useful for treating soft surfaces and to add them to dormant bacteria is clearly within the purview of an ordinary artisan. Horney clearly teaches additives to dormant bacteria is well known. The bacterial counts useful are disclosed. The specific adhering agents are disclosed. To combine the two is clearly an obvious modification of the cited prior art. Thus the claims are *prima facie* obvious over the cited prior art.

Response to Arguments

Applicant's arguments filed August 3, 2006, have been fully considered but they are not persuasive. The argument that Lin and Horner require the presence of a

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surfactant which is excluded from composition (B) of claim 46 is noted, however, composition (B) of claim 46 does not positively recite the exclusion of a surfactant, per se. The language of composition (B) of claim 46 is open terminology which can include a surfactant, see "consisting essentially of". Also the argument that Lin and Horner would be unable to perform their intended function without a surfactant is noted, however, the surfactant can be present in such small amounts, as low as 1%, that this would have led one of ordinary skill in the art to combine the cited prior art with an expectation of success.

Also, Lin is combined with other references which do teach adhering agents, notably WO Patent (or Horner), Vinod and Blyth. Further, Horney is cited for its teaching of bacterial products and additional ingredients as necessary, note above. Horney et al are not cited for a specific teaching of adhering agents, although they do teach a carrier including a perfumant is present. Horner et al clearly teach adhering agents since they disclose condensation products, page 12, lines 20-22. Vinod and Blyth et al clearly teach fluorochemicals and stain blockers which are encompassed by the claimed adhering agents. One of skill in the art would have been motivated to combine these agents to control odor with an expectation of successful results.

Thus, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The arguments that the disclosed compounds are different than those

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newly required by claim 46 are noted. However, the art teaches one or more of the identical compounds claimed herein, and one of skill would have been motivated to select for these compounds. Also, with the combination of the cited prior art the composition of Lin would not be expected to be washed away as alleged by Applicants because as pointed out by Applicants the combination would have been expected to provide for the successful results by preventing removal of the composition. Lin et al teach many surfaces and they teach that their composition provides long term effect of beneficial bacteria that control pathogens and degrade wastes on a surface, see the abstract.

Horner et al teach or suggest a composition of an adhering agent and the bacteria since at page 10, line 13, the composition is disclosed to be liquid and to include enzymes derived from the same bacterium as claimed, see page 7, lines 8-17. Further, stain blockers such as maleic anhydride polymers (i.e. hydrolyzed vinyl aromatic maleic anhydride polymer) are disclosed at page 32, lines 33-37 and also acrylic acid co-polymer at line 36. Thus, the argument that it would not have been obvious to include stain blockers and fluorochemicals in compositions containing bacteria is not deemed persuasive because the bacteria produce enzymes which can react with the compounds to provide for adherence to the surface. Note that any surfactant present can be in such low percentage amounts that one of skill would have been motivated to select for these agents and compounds for use together with the expectation of successful results. Also Horner et al disclose bicarbonates to be present at page 30, line 33.

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Each of Lin et al, Horney et al and Horner et al disclose varied Bacillus spore formers as claimed herein, see discussion above. Lin et al clearly teach that the spore formers provide a long lasting effect, see the abstract. Thus, this at least suggests that their composition would have been expected to be stable, see the abstract of Lin et al. Further, to select for the whole microorganism of which contains the enzyme recognized by Horner et al to be effective for treating surfaces and malodiferous organic material is clearly an obvious modification of the cited prior art.

Also Horner et al and Lin et al both teach non-ionic surfactants to be useful with the spore formers and hence they would have been expected to provide successful results and Lin et al teach that they do not inhibit spore stability, note column 5, lines 54-55. Therefore, the argument that Lin et al teach away from the combination by suggesting that "usual" surfactants, which are used by Horner's laundry detergent, may adversely affect the activity of the dormant bacteria, is not well-founded. Furthermore, Horner et al is not limited to simply a laundry detergent per se, as alleged by Applicants' response. Horner et al clearly teach hard surface cleaning, note page 1, line 15.

Therefore, the alleged connection by Applicants that the composition in Horner et al and Lin et al is intended to be washed away during use is not convincing or persuasive. The same chemical agents are disclosed as discussed above, and would intrinsically function as adhering agents, per se.

In response to applicant's argument that the adhering agent and bacteria products are not taught to be combinable in a single reference is noted, however, the fact that applicant has recognized another advantage which would flow naturally from

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following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Horney is not combined for its teaching of enzymes per se, but for its teaching that microorganisms and their products are well known to be combined with other well known ingredients as necessary to affect an intended purpose or function.

Therefore, the point by Applicant that Horney teaches away from replacing enzymes is not relevant to the combination of the cited references since Horney does teach positively that other ingredients are added as necessary. The motivation to combine bacterial products with other necessary ingredients for an intended purpose is clearly set forth in the combination of all of the cited references taken together and not just Horney and Lin, or vice versa.

To select adhering agents as the necessary ingredient to combine with bacterial products for effecting odor control is clearly taught or suggested by the cited prior art combination and not just gleaned from one or two references taken together. Furthermore, Horner et al or WO teaches adhering agents as well for use in odor control and combining them with bacterial products. One of skill would have been motivated to adhere bacteria and other agents to a surface to effect continued odor control over a period of time and to add an adhering agent to the composition to effect this is clearly an obvious modification of the cited prior art.

Vinod and Blyth et al teach that the stain blockers can serve as adhering agents because they coat the surface and hence adhere to it so they can adhere the bacteria

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as well. Vinod clearly teach or suggest at column 7, lines 25-50, that there is a desire to improve the overall distribution and contact between the surface and the composition and that this can be improved by applying the stain blocker together with a detergent (i.e. surfactant). Thus, adhesion is a desired expected successful result of the cited prior art combination and in the absence of evidence to the contrary the claim remains prima facie obvious.

The prior art of record is cited and discussed above.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DEBORAH K. WARE
PATENT EXAMINER

October 14, 2006